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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/712,611 | 11/13/2003 | Theodore Bydalek | 11-9540-6520-0000-2 | 9015 |

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| EXAMINER |
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SHARP, JEFFREY ANDREW

| ART UNIT | PAPER NUMBER |
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3677

DATE MAILED: 08/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|----------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/712,611 | BYDALEK ET AL. | |
| | Examiner | Art Unit | |
| | Jeffrey Sharp | 3677 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 48-66 is/are pending in the application.
- 4a) Of the above claim(s) 64-66 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 48-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2005 and 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

[1] This action is responsive to Applicant's request for consideration filed on 14 June 2006 with regard to the final Official Office action mailed on 14 February 2006.

Status of Claims

[2] Claims 1-47 are cancelled and therefore, all previous rejections and arguments are moot in view of the new grounds of rejection presented in this Office Action. New apparatus claims 48-63 are pending.

Newly submitted claims 64-66 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The claims recite a method, which differs from the apparatus invention previously examined.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, new claims 64-66 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Information Disclosure Statement

[3] Applicant's lengthy IDS filed 6/19/2006 has not yet been fully considered. All foreign and NPL documents have been considered. A brief review of the documents contained therein revealed that most of the documents are unrelated to the claims of this application. Therefore, the applicant is requested to identify twenty or so documents most relevant to the claims of this

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application, so that they may be given proper consideration by the examiner. Though now simply a request, it may be applied under Rule 105 in the future.

Double Patenting

[4] Claims 62 and 63 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 58 and 59. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Drawings

[5] The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "annular bearing surface on the body is spherically convex" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Support for this limitation is found in originally filed paragraph [0061]; however, the originally filed drawings fail to show this embodiment. The originally filed drawings only show a frustoconical annular bearing surface.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure

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must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

New Grounds of Rejection

Claim Rejections - 35 USC § 112

[6] The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

[7] Claim 60 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Element "e)" is missing.

Claim Rejections - 35 USC § 102

[8] The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

[9] Claims 48, 49, 50, 52, 54, 55, and 56 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by GB 2179416 A.

In short, GB 2179416 A teaches a fastener assembly (figure 1) comprising a body (5) being configured as a nut and having a torque transmitter (clearly shown in figure 2) and threads, and a cap (4) retained on the body (5), wherein the cap is held onto the body via an interference fit facilitated by at least one groove (@ 9 and 10). The body (5) has an annular bearing surface (extreme right) adjacent a generally cylindrical surface (2). The fastener assembly further includes a washer (3).

[10] Claims 48, 49, 50, 52, 53, 54, 56, 60 (as understood), and 61 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by FR 633186 A.

In short, FR 633186 A teaches a fastener assembly comprising a body (a) being configured as a nut and having a torque transmitter (b) and threads, and a cap (d) retained on the body (a), wherein the cap is held onto the body via an interference fit facilitated by at least one groove (unlabeled annular indentation). The body (a) has an annular bearing surface (left figure 1) adjacent a generally cylindrical surface.

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[11] Claims 48, 49, 50, 52, 54, and 56 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Becker US-4,143,578.

In short, Becker teaches a fastener assembly (10) comprising a body (12) being configured as a nut and having a torque transmitter (hexagonal profile) and threads (24), and a cap (14) retained on the body (12), wherein the cap is held onto the body via an interference fit facilitated by at least one groove (26). The body (12) has an annular bearing surface (18) adjacent a generally cylindrical surface (30).

[12] Claims 48, 49, 50, 51, 52, 54, and 56, are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Masuda et al. US-4,557,654 (figures 7 and 8).

In short, Masuda et al. teaches a fastener assembly comprising a body (figure 7) being configured as a nut and having a torque transmitter (profile) and threads, and a cap (24) retained on the body (figure 7), wherein the cap is held onto the body via an interference fit facilitated by at least one groove (22) comprising a plurality of notches (22). The body (figure 7) has an annular bearing surface (not labeled, above 27). The fastener assembly further includes a washer (27).

[13] Claims 48, 49, 50, 52, 54, 55, and 56 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hobson et al. US-4,427,326.

In short, Hobson et al. teaches a fastener assembly (figure 2) comprising a body (20) being configured as a nut and having a torque transmitter (50) and threads, and a cap (30) retained on the body (20), wherein the cap is held onto the body via an interference fit facilitated

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by at least one groove (24). The body (20) has an annular bearing surface (26) adjacent a generally cylindrical surface (25). The fastener assembly further includes a washer (40).

[14] Claims 48, 49, 50, 52, 54, 55, and 56 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Liffick US-3,960,047.

In short, Liffick teaches a fastener assembly comprising a body (20) being configured as a nut and having a torque transmitter (hexagonal profile 22) and threads (34), and a cap (42) retained on the body (20), wherein the cap is held onto the body via an interference fit facilitated by at least one groove (48). The body (20) has an annular bearing surface (30) adjacent a generally cylindrical surface (@ 48).

[15] Claims 48, 49, 51, 52, 56, and 57 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Espey et al. US-5,350,266.

In short, Espey et al. teaches a fastener assembly comprising a body (20) being configured as a nut and having a torque transmitter (hexagonal profile) and threads, and a cap (40) retained on the body (20), wherein the cap is held onto the body via an interference fit facilitated by at least one groove (33) comprising a plurality of notches (33). The body (20) has an annular bearing surface (28).

Claim Rejections - 35 USC § 103

[16] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[17] Claims 58-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker US-4,143,578 in view of any one of Crowther US-1,940,675 or Zorn et al. US-4,240,670 or GB 2051285 A.

In short, Becker teaches a fastener assembly (10) comprising a body (12) being configured as a nut and having a torque transmitter (hexagonal profile) and threads (24), and a cap (14) retained on the body (12), wherein the cap is held onto the body via an interference fit facilitated by at least one groove (26). The body (12) has an annular bearing surface (18) adjacent a generally cylindrical surface (30).

However, Becker fails to disclose expressly, the annular bearing surface (18) to be generally spherically convex.

Crowther suggests on page 2 lines 116-119, that an annular bearing surface for a nut is an obvious variant of a conical bearing surface in the art.

Zorn et al. suggest on column 3 lines 48-49, a generally spherically convex annular bearing surface (48). The generally spherical convex shape of the annular bearing surface causes the surrounding washer (52) to expand radially outwardly after torque is applied to the nut, and to facilitate frictional engagement between the washer and its mating workpiece (12').

GB 2051285 A suggests a generally spherically convex annular bearing surface (16) for self-centering purposes.

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Therefore, at the time of invention, it would have been obvious to one of ordinary skill in the art to modify the annular bearing surface (18) taught by Becker, to be generally spherically convex as suggested by Zorn et al., in order to cause radially outward expansion of a surrounding washer. It would have also been obvious to one of ordinary skill in the art to substitute the annular bearing surface (18) taught by Becker, for a generally spherically convex annular bearing surface, since Crowther deems the two to be art-recognized equivalents. Lastly, it would have been obvious to one of ordinary skill in the art to modify the annular bearing surface (18) taught by Becker, to be generally spherically convex as suggested by GB 2051285 A, in order to improve the self-centering function of the fastener assembly, especially when in engagement with a washer.

Conclusion

[18] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is as follows: See form PTO-892.

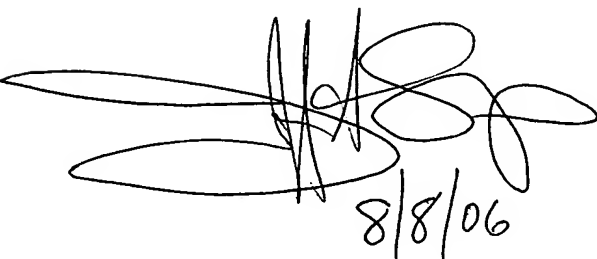
[19] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Sharp whose telephone number is (571) 272-7074. The examiner can normally be reached 7:00 am - 5:30 pm Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached on (571) 272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

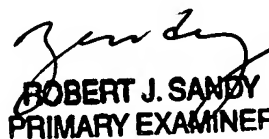
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAS



Handwritten signature and date 8/8/06.



Handwritten signature and printed name: ROBERT J. SANDY
PRIMARY EXAMINER